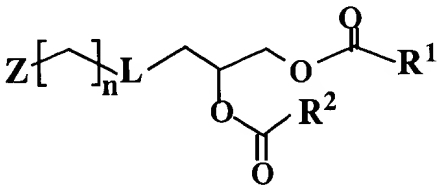
Amendments to the Specification:

On page 3, amend the paragraph beginning on line 1 as follows:

In one aspect, the invention includes a liposome composition containing a lipid represented by the formula:

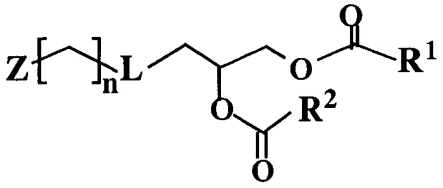


a1

wherein each of R^1 and R^2 is an alkyl or alkenyl chain having between about 8 to about 24 carbon atoms; n = ~~1~~0-20; L is selected from the group consisting of (I) –X-(C=O)-Y-~~CH_2~~-, (ii) –X-(C=O)-, and (iii) –X-CH_2-, wherein X and Y are independently selected from oxygen, NH, and a direct bond; and Z is a weakly basic moiety that has a pK of less than about 7.4 and greater than about 4.0.

On page 6, amend the paragraph beginning on line 19 as follows:

In one aspect, the invention includes lipids represented by the structure shown below:



a2

wherein each of R^1 and R^2 is an alkyl or alkenyl chain having between about 8 to about 24 carbon atoms; n = ~~1~~0-20; and in a preferred embodiment is between 1-10; L is selected from the group consisting of (i) –X-(C=O)-Y-~~CH_2~~-, (ii) –X-(C=O)-, and (iii) –X-CH_2-, wherein X and Y are independently selected from oxygen, NH, and a direct bond; and Z is a weakly basic moiety that has a pK of less than about 7.4 and greater than about 4.0.

On page 7, amend the paragraph beginning on line 15 as follows:

a3

The lipids of the invention include a neutral linkage, L, joining the Z moiety and the tail portion of the lipid. Linkage L can vary, but in one embodiment is selected from

a3 cancel

a carbamate, and ester, and amide, a carbonate, a urea, an amine, and an ether. In a preferred prepared lipid, a carbamate linkage is emplyoed, wherein L is –X-(C=O)-Y-~~CH_2~~-, X is NH, and Y is oxygen.

On page 7, amend the paragraph beginning on line 24 as follows:

a4

The lipid of the invention can be prepared using standard synthetic methods. A lipid was prepared having the structure shown above, wherein Z is an imidazole, ~~N~~n=2, L is a carbamate, and $R^1 = R^2 = C_{17}H_{35}$. A reaction scheme for preparation of this lipid is shown in Fig. 1. Full details of the synthesis are also provided in Example 1. Briefly, the para-nitrophenyl carbonate of 1,2-distearoyl glycerol (Compound I) and para-nitrophenyl chloroformate (Compound II) and reacted with histamine (Compound IV), to yield a lipid (compound VI) having an imidazole moiety linked to a distearoyl tail via a carbamate linkage. A similar synthesis, using glycerol in place of 1-amino-2,3-propanediol, can also be used to produce a carbonat-linked product (L = -O-(C=O)-O-CH_2- or –O-(C=O)-CH_2-).

On page 8, amend the paragraphs beginning on line 4 and ending on 18 as follows:

a5

Given the guidance and examples herein, other synthesis of a lipid having other linkages can be readily accomplished by those of skill in the art. Other linkage include, for example, ether (L = O-CH_2-) and ester linkages (L = -O-(C=O)-), as well as urea amide, ~~urea~~ and amine linkages (i.e., where L = -NH-(C=O)-NH-, -NH-(C=O)-~~CH_2~~-, -~~NH-(C=O)-NH-CH_2-,~~ or –NH-~~CH_2~~-). A keto linkage, where ~~L~~X is a direct bond, may also be prepared. Figs. 2A-2B illustrate preparation of an ~~ether~~amine-linked lipid (Fig. 2A) and ~~an ester linked~~ lipid having an NH-containing linkage (Fig. 2B), respectively. In Fig. 2A, the terminal amine of histamine is reacted with glycidyl chloride, hydrolyzing the resulting epoxide and acylation the resulting diol.

In Fig. 2B, ~~an ester linked~~ lipid having an NH- containing linkage ~~(L = -O-(C=O)- or –O-(C=O)-CH_2-)~~ is prepared, for example, by reacting histamine with an activated derivative of glyceric acid acetonide (2,2-dimethyl-1,3-dioxolane-4-carboxylic acid) or the four-carbon homolog, 2,2-dimethyl-1,3-dioxolane-4-acetic acid. The diol is subsequently deprotected and acylated.